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The background of the slide features a large, faint watermark of the University of Edinburgh crest. The crest is a shield with a crown on top, flanked by two lions. The shield is divided into four quadrants, each containing a different symbol. The crest is surrounded by a circular border with the text 'UNIVERSITY OF EDINBURGH' and 'FOUNDED 1582'.

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Towards a revised model of Code and social regulation

Dr Richard Jones

School of Law, University of Edinburgh

richard.jones@ed.ac.uk

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Some suggested revisions to Lessig's model

- 1) Distinction between Code, 'architecture' and technology (Code is a subset of 'architecture')
- 2) Intentional regulation v. unintended consequences
- 3) Possibility of 'regulatory dissonance'
- 4) Difference between what is (positive; social forces), what can be (future regulation), and what should be (political theory; ethics)
- 5) Comparing Lessig's and Bottoms' models
- 6) Add a fifth dimension of regulation?

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Some suggested revisions (cont.)

- 7) Need to model resistance to regulation
- 8) Assumption of regulatory desire, and the case for modelling regulators as themselves being within a social forces model
- 9) Architecture (and hence Code) has varying degrees of ‘fixity’

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1. Distinction between Code, Architecture and technology

- From the perspective of IP/IT it makes sense to use Code, architecture and technology as synonyms
- But from wider perspective of social regulation it makes more sense to regard Code as a subset of Architecture – viz. Code is the Architectural mode within the area of the Internet
- Within crime prevention, SCP is Architectural mode
- Not all technology is regulatory (or if it is it is only weakly, unintentionally so)

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2. Intentional regulation v. unintended consequences

- Lessig conflates two different meanings of terms like ‘regulation’ and ‘control’
- First meaning = measures deliberately intended to regulate or control – e.g. DRM technologies
- Second meaning = effective ‘structural’ constraints of a technology or system, which may well be unintended consequences
- Big difference between the two: political, moral, legal
- So, distinguish between regulation and social forces
- (Unintended outcome could ‘become’ deliberate regulation through omission, but still makes sense to separate 1 from 2.)

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3. Possibility of ‘regulatory dissonance’

- Just as a technology may unintentionally constrain action, the opposite is also possible: an intentional regulatory measure may fail to work properly
- Code doesn’t always work as intended. Why not?
- Within Lessig’s broad meaning of ‘regulation’, we can think of this as regulatory dissonance: conflicting pressures from different regulatory modes (Lessig mentions some of these in book & articles – e.g. between norms and law, or economy and Code)
- In my formulation, failure is explicable in terms of social forces being more powerful than regulatory measure

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4. Difference between is, can, and should

- So my argument is that we can use Lessig's regulatory model not only to model how regulation can be brought about, but also to model social forces at play (is) (= sociological description)
- In fact, we need a model that accounts for existing social forces at play in addition to regulation
- Why? Because modelling social forces increases our understanding of social processes, and hence increases likelihood of regulatory effectiveness
- (All of which is separate from questions of 'should' - privacy, liberty, morality, fairness etc.)

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5. Comparing Lessig's and Bottoms' models

- In context of trying to understand (non-) compliance in prisons and with community penalties, Bottoms (1999; 2001) develops a model of 'Principal mechanisms underpinning compliant behaviour'
- Developed entirely independently, model nonetheless has certain similarities to Lessig's

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5. (cont.) Bottoms' model (2001: 90):

- A. Instrumental/prudential compliance
 - 1) Incentives
 - 2) Disincentives
- B. Normative compliance
 - 1) Acceptance of/belief in norm
 - 2) Attachment leading to compliance
 - 3) Legitimacy
- C. Constraint-based compliance
 - 1) Physical restrictions (a) Natural or (b) Imposed
 - 2) Restrictions on access to target
 - 3) Structural constraints
- D. Compliance based on habit or routine

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5. Comparing Lessig's and Bottoms' models

- Certain striking similarities
- A. Instrumental seems similar to Economy and Law
- C. (1) (a), C. (3), and D seem to describe unintended, structural factors (social forces)
- So both Lessig's and Bottoms' models cover many of the same dimensions
- And both conflate (Lessig) or mix (Bottoms) intended measures with unintended (emergent) outcomes

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6. Add 'Psychology' as a fifth dimension?

- A 'regulating' dimension to social life not accounted for by Lessig's original model is 'Psychology'
- Psychology regulates individual and group activities, and can be manipulated to effect (marketing, advertising, desire, like/dislike, status...)
- It's important in relation to Internet (anonymity, group dynamics, interactions, loyalty, desire, hostility...)
- Add Psychology as fifth? Or use it to replace Norms?
- Or move Norms to a separate social forces model, because actually Norms aren't directly regulable?

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7. Need to model resistance

- Resistance, including resistance to Code, is not always futile
- Like some criminals, the regulated may be strongly motivated (and have techniques) to resist regulation. Code doesn't always work.
- Software, hardware manufacturers: market dominance; profits
- Code: borrow from R.V. Clarke's Situational Crime Prevention sociology/psychology?: SCP is not perfect, but a well-designed SCP measure is effective for most people most of the time (because of thresholds, difficulty, commitment)
- Useful in distinguishing crackers from lay users?
- Distinguish criminals from the regulated
- Resistance can be modelled along same modes as Lessig's original model, including Code
- Bottoms: Perceived legitimacy is crucial for compliance

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8. Assumption of regulatory desire, and the case for modelling regulators as themselves regulated
- Lessig assumes regulators want to regulate
 - Yet research on police, for instance, suggests this assumption is not always correct – police officers may be influenced by economics, norms, not just law
 - We can think of regulators as themselves subject to regulation and social forces
 - We then get multiple ‘nesting’, ‘tiering’ or ‘levels’ of regulation and of forces
 - (Within this, Code (and other forms of Architecture) has varying degrees of effectiveness)

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9. Architecture (and hence Code) has varying degrees of ‘fixity’

- Think of Architecture as being comprised of a spectrum of fixity, from fixed to instantly-changeable
- Since Code is a subset of Architecture, this applies to Code too
- Hardware is more ‘fixed’ than software (usually)
- Some software is more ‘fixed’ than other software
- Thinking of Code in this way helps show that in some ways Code is simply another variant of Architecture
- However, it also identifies an aspect special to Code (and Law), namely the rapidity with which it can (sometimes) be changed
- Degree of fixity has important implications regarding longevity, compatibility, adaptability, competition.

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Conclusion

- Lessig's notion of Code-as-a-means-of-regulating has much to commend it
- From a sociological point of view, there are various ways, identified in this presentation, by which his model can be augmented
- Re. Architecture (incl. Code), most significantly:
 - regulatory strategies v. structural constraints (forces)
 - degree of fixity along a spectrum
 - modelling the implementers of Code as themselves subject to regulatory strategies and social forces